

Abstracts

This section of the JOURNAL is published in collaboration with OPTHALMIC LITERATURE, published by the British Medical Association. The abstracts are divided into the following sections:

*Syphilis (Clinical, Therapy, Serology, Biological False Positive Phenomenon, Pathology, Experimental).
Gonorrhoea.
Nongonococcal Urethritis and Allied Conditions.*

*Reiter's Disease and Allied Conditions.
Antibiotics and Chemotherapy.
Public Health and Social Aspects.
Miscellaneous.*

After each subsection of abstracts follows a list of articles that have been noted but not abstracted.

Syphilis (Clinical)

Abnormal Chemoreceptor Response to Hypoxia in Patients with *Tabes Dorsalis*

EVANS, R. J. C., BENSON, M. K., and HUGHES, D. T. D. (1971) *Brit. med. J.*, **1**, 530

[From the London Hospital, E.1.]

Nine patients with *tabes dorsalis* and one patient with diabetic autonomic neuropathy were subjected to hypoxia to test the integrity of their carotid chemoreceptors. Ventilation and pulse rate changes were monitored and compared with those of a group of normal subjects of comparable age and sex. Four patients had a completely negative response to hypoxia, and the changes in ventilation in the group of patients as a whole were significantly less than in the control subjects. The results indicate that some patients with autonomic denervation are unable to adjust their respiratory system in response to hypoxia.

Authors' summary

Acquired Syphilis in Children. Report of Two Cases [in Polish]

JASTRZEBSKA, D., and ZUKOWSKI, H. (1972) *Przegl. dermatol.*, **59**, 33

Syphilis and Pregnancy

[in French]

DEGOS, R. (1971) *Rev. franç. Gynec.*, **66**, 551, 3 refs

Luetic Signs on the Human Skeleton [in German]

JUNG, H. (1971) *Hautarzt*, **22**, 509

Sarcoid-like Granulomas in Secondary Syphilis

KAHN, L. B., and GORDON, W. (1971) *Arch. Pathol.*, **92**, 334

Differential Diagnosis of Virus Hepatitis and Early Hepatic Syphilis [in Polish]

GRANICKI, O., SAWARYN, T., and BURZYNSKI, Z. (1971) *Pol. Tyg. lek.*, **26**, 276

Secondary Syphilitic Hepatitis. Clinical and Pathological Considerations and Report of a Case [in Italian]

ALBERTAZZI, E., STRANI, G. F., and SARTORIS, S. (1970) *G. ital. Derm.*, **45**, 440

Polyneuritis in the Course of Early Latent Syphilis [in Polish]

HULANICKA, K., and GULEWICZ, F. (1971) *Neurol. Neurochir. pol.*, **5**, 121

Case of Cerebral Gumma of Left Temporal Lobe [in Japanese]

KINOSHITA, K. (1971) *Brain Nerve (Tokyo)*, **23**, 365

Symmetrical Syphilitic Gumma of the Frontal Lobes. Case Report [in Italian]

LECHI, A. (1970) *Acta neurol. (Naples)*, **25**, 542

Tabetic Arthropathies. Presentation of 26 Cases [in Italian]

FALZI, M. (1970) *Fracastoro*, **63**, 888

Syphilis (Therapy)

Therapy for Incubating Syphilis

SCHROETER, A. L., TURNER, R. H., LUCAS, J. B., and BROWN, W. J. (1971) *J. Amer. med. Ass.*, **218**, 711

The epidemiological control of syphilis would be greatly enhanced if gonorrhoea therapy were simultaneously curative for incubating syphilis. In a co-operative study co-ordinated

by the Center for Disease Control, schedules currently recommended by the Public Health Service for gonorrhoea treatment in the male and female (aqueous procaine penicillin G 2.4 and 4.8 million units, respectively) were evaluated in 127 patients exposed to infectious syphilis within a 30-day period. After a 3-month clinical and serological follow-up, these schedules were found to be 100 per cent. effective in aborting incubating syphilis. Of a control group of contacts treated with placebo who were exposed to infectious syphilis within 30 days preceding treatment, 30 per cent. developed syphilis. Consequently, aqueous procaine penicillin G in the dosage of 2.4 and 4.8 million units is curative therapy for patients with gonorrhoea with co-existing incubating syphilis.

[As the authors state this study would have achieved greater credibility if the period of follow-up had been longer.]

Authors' summary

Penicillin Therapy in Primary and Secondary Syphilis

SMITHURST, B. A. (1971) *Med. J. Aust.*, **2**, 248 15 refs

Syphilis (Serology)

Structure of Treponemes; Demonstration of a New Lipoidal Hapten in the Reiter Treponeme. Study of Human Sera containing Antibodies reacting with This Hapten

(Structure antigénique des *tréponèmes*; mise en évidence d'un nouvel haptène lipidique dans "*Treponema reiteri*"). Etude de sérums humains contenant des

anticorps dirigés contre cet haptène)
DUPOUEY, P. (1972) *Ann. Inst. Pasteur*, **122**, 283

Lipids constitute 20 per cent. of the dry weight of treponemes; they include lecithin and haptenic lipids such as cardiolipin and a galactodiglyceride. Some normal sera may contain antibodies which combine with these, giving false positive reactions in the Reiter protein complement-fixation test because of the presence of lipids in the antigen. The author has shown the presence of a further lipid, glycolipid 11, in extracts of the Reiter treponeme and the closely related Kazan V strain. This is thought to have D-mannose or D-glucose in its molecule and to constitute 1 per cent. of the dry weight of these organisms. Methods for its extraction are described.

93 human sera were tested. 28 came from patients with tuberculosis, one was reactive only in the Kolmer WR, and 64 were selected because they gave isolated positive reactions in the RPCFT; none of these patients had any evidence of syphilis and TPI tests, when done, were negative. Sixteen of the sera gave weakly positive complement-fixation tests with glycolipid 11, and six were strongly positive; three of these last were also reactive with cardiolipin or galactodiglyceride or both. The possible significance of these findings for the use of the RPCFT in practice is discussed.

A. E. Wilkinson

[Reprinted from *Abstracts on Hygiene* by permission of the Editor.]

Studies on the FTA-ABS Test in Saliva of Syphilitics and in the Milk of Syphilitic Lactating Mothers [in Polish]

JATKOWSKA, R., and KOZAKIEWICZ, J. Symposium of the 9th Polish Venereological Conference, Warsaw, 1971, p. 85 2 refs

The FTA-ABS test was compared in the serum and saliva of 84 patients with syphilis in various stages. In a proportion the serum TPI test was also performed. The FTA-ABS reactions were very similar in serum and saliva. Thus, in thirteen primary seropositive cases, the saliva gave a positive reaction in twelve; in nine-

teen secondary syphilitics, the saliva was FTA-ABS positive in every case. In the later stages the proportion of salivary positive reactions was somewhat lower than serological reactions. In 57 non-syphilitic controls only two gave a positive salivary FTA-ABS reaction. In some of the FTA-ABS positive patients who were lactating, a positive FTA-ABS reaction was also found in the milk.

G. W. Csonka

Syphilis Reference Serology

FISCHMAN, A., and BREE, A. D. (1971) *N. Z. med. J.*, **74**, 238

Value of Autoantibodies to Vascular Lipids in Syphilis and Non-syphilis

STONE, O. J. (1971) *Int. J. Derm.*, **10**, 31

Results of the Nelson Test during Administration of Gentamycin [in German]

HERTMANN, H. J., and BILL, S. (1971) *Z. Haut- und Geschl.-Kr.*, **46**, 87

The Wassermann Reaction in Patients and Pregnant Women [in Russian]

MIRONOVA, T. M. (1972) *Vestn. Derm. Vener.*, **46**, No. 2, p. 76

Investigations into C-reactive Protein (CRP) in Sera of Patients with Early Acquired Syphilis [in Polish]

GIBOWSKI, M. (1972) *Przegl. dermat.*, **59**, 22

Automatic Indirect Immunofluorescence (AFTA) applied to Syphilis Serology [in French]

KASATIYA, S. S., and BIRRY, A. (1971) *Canad. J. publ. Hlth*, **62**, 166

Further Evaluation of the Automated Fluorescent Treponemal Antibody Test for Syphilis

COFFEY, E. M., NARITOMI, L. S., ULFELDT, M. V., BRADFORD, L. L., and WOOD, R. M. (1971) *Appl. Microbiol.*, **21**, 820

Relationship between Immobilizing Antibodies of Serum and Cerebrospinal Fluid [in German]

MÜLLER, F., KRUSKA, M., and HIPPIUS, H. (1970) *Z. Neurol.*, **198**, 237

Syphilis (Biologic false positive phenomenon)

Familial Chronic Biologic False Positive Seroreactions for Syphilis. Report of Two Families, One with Three Generations Affected

KOSTANT, G. H. (1972) *J. Amer. med. Ass.*, **219**, 45

In the first family, the grandfather, now aged 71, had shown positive tests for reagin and negative treponemal tests (RPCFT and FTA-ABS) for 11 years. His wife was seronegative. Their daughter, aged 58, also showed BFP reactions over 11 years; she also had a positive indirect Coombs test. Her two children had negative tests for reagin. The son of the original patient, now aged 41, was first found to have positive tests for reagin when aged 22; his spinal fluid was normal. Despite massive treatment with penicillin, his reagin tests remained positive and tended to increase in titre. Because treponemal tests were negative, these were thought to be BFP reactions. Apart from a history of a subdural haematoma, which was successfully drained, his health was good; he showed no evidence of congenital or acquired syphilis. Like his sister, he had a positive Coombs test. His wife was seronegative. Their daughter, aged 7, showed a BFP reaction, but apart from this she was perfectly healthy. This is thought to be the first report of BFP reactions spanning three generations.

In the second family, the father, now aged 51, had been treated for supposed syphilis when aged 26 because of positive reagin tests and a darkground negative penile lesion. Tests for reagin remained positive despite much treatment; as a subsequent FTA-ABS test was negative, these were thought to be chronic BFP reactions. His wife was seronegative, but two of their three children

had positive reagin tests; Reiter protein complement-fixation tests were negative but specific treponemal tests were apparently not performed. Neither child showed any clinical evidence of congenital syphilis.

A. E. Wilkinson

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Syphilis (Pathology)

Congenital Syphilis in the Newborn Infant: Clinical and Pathological Observations in Recent Cases

OPPENHEIMER, E. H., and HARDY, J. B. (1971) *Johns Hopk. med. J.*, **129**, 63, 8 figs, 13 refs

A marked decline has been noted in autopsied cases of congenital syphilis since the advent of penicillin therapy. Between 1910 and 1940, 274 cases underwent autopsy at the Johns Hopkins Hospital, but only 47 in the succeeding 30 years. Sixteen of the latter, aged 1 hour to 9 weeks, were born alive and the pathological changes in these are reviewed. Haemorrhage was the immediate cause of death in five of the seven infants who died in the first few days of life. The infants who lived longer showed marked failure to thrive, and five of them, as well as two neonates, died from overwhelming secondary bacterial infection. Severe hepatitis, alone, appeared to be responsible for death in several instances.

The basic pathological pattern continues to be interstitial inflammation and fibrosis, involving almost all the viscera. Sites with a high percentage of lesions are the liver, spleen, bone, kidney, pancreas, skin and mucous membranes, intestinal tract, and eyes. The intense pancreatitis and submucosal fibrosis and thickening in the intestinal tract are both unique and have not been described in any viral disease or other congenital condition. No instances of pneumonia alba were seen in the sixteen cases and a review of the lungs of almost 300 cases autopsied in the pre-penicillin era revealed only seven cases of this. Though found in the past, tissue necrosis simulating miliary gummata was not seen in the recent cases; however, the pancreatitis and intestinal lesions, when

combined with bone alterations, form a pathognomic pattern permitting differentiation from erythroblastosis foetalis, congenital viral diseases, and toxoplasmosis.

P. Rodin

Lymphoblastic Transformation Reaction in Syphilis

(Le test de transformation lymphoblastique au cours de la syphilis)

JANOT, C., GRANDIDIER, M., PUPIL, P., THOMAS, J.-L., BEUREY, J., and DE LAVERGNE, E. (1971) *Presse méd.*, **79**, 1901

Transformation reactions were performed on lymphocytes from the peripheral blood of 83 patients with syphilis at various stages and 43 patients with negative serological tests who were thought not to have syphilis. The antigen used was a saline suspension of the Nichols strain of *Tr. pallidum*. Tests were incubated for 4 days and lymphoblastic transformation was assessed from stained smears; a 4 per cent. difference in the proportion of transformed cells between cultures with and without antigen was considered significant. The test was found to be positive in four of six patients with primary, nine of eleven with secondary, and five of six with congenital syphilis, also in all of eighteen with cardiovascular or neurosyphilis, in all of thirty with latent syphilis, and in twelve patients with treated syphilis on whose sera the WR and TPI tests were negative. The stage of the disease at which these twelve patients were treated is not stated. Three of the 43 control group of patients gave positive results. Two of these three were sensitive to penicillin and one to ampicillin; these were thought to be cross-reactions to the cephalothin which was incorporated in the culture medium to prevent bacterial contamination.

The authors interpret their results as showing that delayed hypersensitivity is established very early in the course of syphilis, that it is maintained throughout the disease, persisting even in treated patients whose serological tests have become negative.

A. E. Wilkinson

Gonorrhoea

Oral Ampicillin in

Uncomplicated Gonorrhoea. IV. Comparision of Pharmacological and Clinical Results

ERIKSSON, G. (1971)

Acta derm-venereol. (Stockh.), **51**, 467 4 figs, 28 refs

[From the Department of Dermatology, Sodertjshuset, Stockholm, Sweden]

As part of a project designed to investigate the efficacy of oral ampicillin in uncomplicated gonorrhoea, the absorption and excretion of the clinically used dosage forms of oral ampicillin and penicillin G injection were observed in 24 healthy volunteers (12 of each sex) who took part in the study carried out in a cross-over fashion. All conditions were as strictly standardized as possible, with the subjects taking the preparations in a fasting state. The following dosage forms were used: 2 g. ampicillin in a single oral dose; the same dose with 1 g. probenecid; 2 g. ampicillin divided into two doses at an interval of 5 hours—always in 0.5-g. tablets with 100 ml. water. Some of the volunteers were given 2 g. ampicillin with 250 ml. of water or as 5 per cent syrup. An intramuscular dose of 2.2 m.u. penicillin G (1 m.u. crystalline plus 1.2 m.u. procaine penicillin) was also tested. Antibiotic concentrations were determined by the cylinder plate method. Ampicillin plus probenecid gave serum concentrations (21.2 µg./ml.) approximately two or three times as high as the divided dosage, and twice as high as the single oral dose. Increase in the water intake or the use of a syrup did not improve the serum concentrations significantly. The penicillin G injection gave serum concentrations lower than with ampicillin plus probenecid, but higher than with the other dosage forms. The duration of penicillinaemia was considerably longer than with the oral ampicillin dosages. The pharmacological findings are compared with the clinical results, and required serum levels as well as the minimum duration of therapeutic levels are discussed.

Author's summary

Rifampicin compared with Penicillin in the Treatment of Gonorrhoea

MALMBORG, A.-S., MOLIN, L., and NYSTRÖM, B. (1971)
Chemotherapy, **16**, 319

100 male and 100 female patients with uncomplicated gonorrhoea confirmed by culture were treated with a single oral dose of 900 mg. rifampicin at the Karolinska Skukhuset, Stockholm. The results are compared with those in the same numbers of patients who had been treated with a single injection of 1 m.u. aqueous benzyl penicillin and 1.5 m.u. aqueous procaine penicillin during the previous 4 months. The sensitivity of gonococci isolated before treatment to penicillin and rifampicin was determined by a disc method. Smears and cultures were taken weekly for 2 to 3 weeks from the urethra in males and from the urethra, cervix, and rectum in females; only those who completed this follow-up were included in the study.

There were seven treatment failures (3.5 per cent.) and eight re-infections in the group treated with penicillin. In those treated with rifampicin, there were 25 failures (12.5 per cent.); rectal cultures were positive in eight of the eleven failures in women. There were also nine re-infections among these 200 patients. All except one of the strains of gonococci isolated before treatment were sensitive to rifampicin *in vitro* (MIC < 1 µg./ml.). But in eleven of the 25 failures, the gonococci isolated at the first follow-up were resistant to rifampicin, nine completely so and two having an MIC > 10 µg./ml. One of the men who failed to respond to rifampicin infected a woman who was not included in the study; she was found to harbour a strain completely resistant to rifampicin.

Because of the low cure rate and the very rapid development of resistance of gonococci to rifampicin, it is not advised for the treatment of gonorrhoea.

A. E. Wilkinson

Human Antibody Response to Lipopolysaccharides from *Neisseria gonorrhoeae*

WARD, M. E., and GLYNN, A. A. (1972)
J. clin. Path., **25**, 56

Lipopolysaccharides were extracted from three strains of gonococci by a phenol-water method. Two strains, G1 and G36, had apparently been recently isolated, and the third, G2, was an old stock strain. The extracts were used to sensitize glutaraldehyde-treated sheep red cells; suspensions so prepared were stable at 4°C. for at least 6 months. The sera tested came from 50 male and 25 female patients with gonorrhoea and from 50 blood donors who served as a control group. The haemagglutination test was performed in plastic trays by adding 0.1 ml. 0.5 per cent. sensitized cells to equal volumes of doubling dilutions of sera which had been previously absorbed with sheep cells before testing. Dulbecco's solution with 1 per cent normal rabbit serum was used as a diluent. Tests were incubated at 37°C. for 1 hour and overnight at 4°C.

If the upper limit of normal was taken as four times the geometric mean titre of the control group of sera, antigens from strains G1, G2, and G36 gave 2, 10 and 4 per cent positive results with the normal sera. With sera from infected males the comparable figures were 46, 33, and 60 per cent., and with sera from infected females 84, 27, and 60 per cent. The patients' sera usually responded to all three antigens but not to the same degree. The frequency or duration of infection did not appear to influence the antibody level.

A. E. Wilkinson

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Bacteriocins from *Neisseria gonorrhoeae* and their Possible Role in Epidemiological Studies

FLYNN, J., and MCENTEGART, M. G. (1972) *J. clin. Path.*, **25**, 60

Inocula from freshly isolated strains of gonococci were seeded as a band about 1 cm. wide across the centre of plates of Difco GC medium base plus 2 per cent. defined supplement. After 24 hours at 37°C. the growth was scraped off and the plate exposed to chloroform vapour for 15 minutes. After further exposure to the air to remove traces of chloroform, the prepared plates could be stored at 4°C. Indicator strains of gonococci

were streaked at right angles to the track of the producer strain, and the plates were incubated for 18 hours in 10 per cent. CO₂ and examined for inhibition of growth. Indicator strains were suspended in 10 per cent. horse serum and stored in liquid nitrogen to prevent degradation.

With a set of six provisionally chosen indicator strains, 75 out of 100 isolates of gonococci proved to be typable; they gave thirteen patterns of inhibition of the indicator strains and these patterns were found to be reproducible. No induction of bacteriocins was found after exposure of gonococci to ultraviolet light or mitomycin C. Tests for bacteriocin production on Columbia chocolate blood agar gave weak and inconsistent results.

A. E. Wilkinson

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Gonococcal Tonsillar Infection

BRO-JØRGENSEN, A., and JENSEN, T. (1971)
Brit. med. J., **4**, 660 8 refs

The patients consisted of 144 men and 66 women suffering from urogenital or rectal gonorrhoea seen at a public clinic for venereal diseases in Copenhagen. Gonococci proved by fermentation reactions were found in cultures from the tonsils of six out of 95 Danish men (6 per cent.) and six out of 66 Danish women (9 per cent.). The organism was found in the throat of only one of 49 men from other countries treated for gonorrhoea in the same clinic. Tonsillar cultures were negative in all of 186 men and 77 women not suffering from gonorrhoea. 80 per cent. of the men and 61 per cent. of the women admitted orogenital contact, but this was more commonly practised with the regular consort rather than with casual acquaintances. Eleven of the thirteen patients with tonsillar infection had practised orogenital contact at their most recent intercourse.

Ten patients (5 men and 5 women) with tonsillar involvement had no symptoms or signs of this. Three patients had mild to moderate signs of tonsillitis, consisting of enlarged tonsils with small yellow-white exudates without regional lymph node

involvement or fever; one complained of sore throat starting 4 days after orogenital contact and the other two had slight discomfort on swallowing. The gonococcal complement-fixation test was negative in all except two cases.

All patients were initially treated with the standard single-dose therapy of 2 g. ampicillin and 1g. probenecid by mouth. In five cases gonococci were still present in the tonsil after this treatment, although the urogenital infection was cured. The organism was isolated from the tonsils for up to 8 weeks.

P. Rodin

Gonococcal Tonsillitis after Orogenital Contact [in Swedish]
HALLGREN, L. (1971) *Svenska Läk-Tidn.*, **68**, 569 6 refs

Of 200 patients treated for urogenital gonorrhoea at a clinic in Gothenberg, Sweden, fifty admitted to orogenital contact when they last had intercourse. Cultures for gonococci were taken from the tonsils of these fifty patients, of whom thirty were men and twenty women. One man and one woman had positive cultures, proved by fermentation reactions. He had a mild sore throat, which showed slight injection, but she had no symptoms. The genital infection responded to oral treatment with a single dose of 2.7 g. ampicillin plus 1 g. probenecid in one case and 1 g. ampicillin repeated after 5 hours in the other. However, the tonsillar infection persisted, but was eliminated with tetracycline in dosage of 250 mg. four times daily for 7 days.

P. Rodin

Gonococcal Arthritis

COOKE, C. L., OWEN, D. S., IRBY, R., and TOONE, E. (1971)
J. Amer. med. Ass., **217**, 204 9 refs

Antibiotic-resistant Gonococci

Leading Article
(1971) *Brit. med. J.*, **4**, 696

Results of Treatment of Gonorrhoea with Oxytetracycline [in Polish]

BOWSZYC, J., DRATWINSKI, Z., FILIPIUK, J., and WIEWIORKOWSKA, L. (1972) *Przegl. derm.*, **59**, 73

Doxycycline in Acute Gonococcal Urethritis [in Italian]
MIRONE, M. (1971)
G. ital. Derm., **106** (46-112), 528

Comparison between Cephaloridine and Penicillin in the Treatment of Gonorrhoea
MOLIN, L., and NYSTRÖM, B. (1970)
Chemotherapy, **12**, 384

Treatment of Gonorrhoea with Spectinomycin and Rifampicin
LABOWITZ, R., PORTER, W. L., and HOLLOWAY, W. J. (1970)
Delaware med. J., **42**, 353

Effect of Double Dose of Aqueous Procaine Penicillin to Treat Gonorrhoea in Men
NELSON, M. (1971) *HSMHA Hlth Rep.*, **86**, 285

Evolution of the Sensitivity of the Gonococcus to Antibiotics (Third Study) [in French]
NIEL, G., NICOD, G., ROIRON, V., and DUREL, P. (1971)
Path. et. Biol., **19**, 53

Gonorrhoea masked by Acne Vulgaris Treatment
CORTESE, T. A., JR. (1971)
J. Amer. med. Ass., **216**, 330

Serological Tests for Gonorrhoea
Leading Article (1972)
Brit. med. J., **1**, 584

Microflocculation Assay for Gonococcal Antibody
REISING, G. (1971)
Appl. Microbiol., **21**, 852

Sensitivity and Reproducibility of Thayer-Martin Culture Medium in diagnosing Gonorrhoea in Women
CALDWELL, J. G., PRICE, E. V., PAZIN, G. J., and CORNELIUS, C. E. (1971) *Amer. J. Obstet. Gynec.*, **109**, 463

Non-gonococcal urethritis and allied conditions

Study of Mycoplasma in University Students with Non-gonococcal Urethritis
SUELTMANN, S., ALLEN, V., INHORN, S. L., and BENFORADO, J. M. (1971)
Hlth Lab. Sci., **8**, 62

653 specimens from 339 students (229 males and 110 females) attending the University of Wisconsin Health Service were tested. 250 complained of symptoms of urethritis or vaginal discharge; 89, who were symptom-free and undergoing routine health examinations, served as a control group.

Commercial PPLO agar and broth were used. For the isolation of T strains these were adjusted to pH 6.0 and supplemented with 10 per cent horse serum, 10 per cent yeast extract (later reduced to 1 per cent), penicillin, 1,000 units/ml., 0.05 per cent. urea, and 0.002 per cent. phenol red. Plates and tubes of broth were inoculated with swabs of secretion or urine and incubated at 30°C. If a colour change developed in the broth cultures, subcultures were made to solid medium. Similar media were used for the isolation of *Mycoplasma hominis*, but the pH was 8.0, urea was omitted, and thallium acetate was added. These were inoculated as before and subcultures were made from the broth to solid medium after 2 to 3 and 7 days. *M. hominis* was identified by its colonial appearance and by a growth inhibition test.

T strain organisms were isolated from 132 of 193 symptomatic males (68 per cent.) and from nine of 36 males in the control group. Among the female students, 36 isolations were made from 57 presenting with symptoms (63 per cent) and from nineteen of 53 (36 per cent.) in the control group. *M. hominis* was grown from 12.5 per cent. of the males with symptoms and from 11 per cent. of those without. For the female students the percentages were 33 per cent. and 4 per cent. respectively.

Paired specimens of urine and a urethral swab were examined concurrently for T strain organisms from 107 of the 339 students. The results agreed in 101 cases. The culture of urine alone is thus thought to be a valid procedure for epidemiological studies. Broth cultures were found to be more sensitive than the solid medium for primary isolation.

The authors think T strain mycoplasmas form part of the normal genital flora in the age group studied.

A quantitative comparison of the numbers present in patients with and without symptoms might help to decide if they have any significance as pathogens.

A. E. Wilkinson

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New Method of Staining *Trichomonas* [in French]

FRANCESCHINI, P. (1971)
Pressé méd., **79**, 486

Incidence of Trichomoniasis and Dysuria in Pregnant Women in Eastern Uganda

LIGHTMAN, J. L., and POWELL-JACKSON, P. R. (1971)
Trop. geogr. Med., **23**, 113

Diagnostic Importance of the Complement Test for the Demonstration of *Trichomonas vaginalis* Infections [in German]

PHILLIP, G., and JANKO, M. (1970)
Zbl. Gynaek., **92**, 465

Influence of Oral Contraception upon the Occurrence of *Candida albicans* in the Vagina [in Danish]

THULIN, H. (1971)
Nord. med., **85**, 399

Anti-*Candida* Factors in Serum and their Inhibitors. I. Clinical and Laboratory Observations

LOURIA, D. B., SMITH, J. K., BRAYTON, G., and BUSE, M. (1972)
J. infect. Dis., **125**, 102

II. Identification of a *Candida*-clumping Factor and the Influence of the Immune Response on the Morphology of *Candida* and on Anti-*Candida* Activity of Serum in Rabbits

SMITH, J. K., and LOURIA, D. B. (1972)
J. infect. Dis., **125**, 115

Biochemical Effects of Nystatin on *C. albicans*

GROSS, U., and GROSS, W. (1972)
Arch. dermat. Forsch., **242**, 389

5-Fluorocytosine Treatment of *Candida* Infections of the Urinary Tract and Other Sites

SCHONEBECK, J., STEEN, L., and TARNVIK, A. (1972)
Scand. J. Urol. Nephrol., **6**, 37

Mycoplasma in Urine collected by Suprapubic Aspiration

MARDH, P.-A., LOHI, A., and FRITZ, H. (1972)
Acta med. scand., **191**, 91

Antibiotics and chemotherapy

Differing Patterns of Wheal and Flare Skin Reactivity in Patients Allergic to the Penicillins

VAN DELLEN, R. G., WALSH, W. E., PETERS, G. A., and GLEICH, G. J. (1971) *J. Allergy*, **47**, 230
[From The Department of Medicine, Mayo Clinic, Rochester, Minnesota]

The immediate wheal and flare skin test reactivity to major and minor antigenic determinants from penicillin G, ampicillin, and methicillin were compared in 240 patients. In 57 patients with positive skin tests to one or another of these drugs, a marked variability in the patterns of reactivity was noted. Among the major determinants, 24 patients reacted to only one drug, five to all three, and eight to two. Among the minor determinants, twenty patients reacted to only one drug, five to all three and nine to two. These results show that a positive skin test to one penicillin drug is not necessarily associated with positive reactions to all the penicillin drugs, indicating that skin test reagents to semisynthetic penicillins as well as to penicillin G may be useful.

Authors' summary

Role of Penicilloylpolylysine in detecting Penicillin Allergy [in Polish]

MACIEJOWSKA, E., Symposium of the 9th Polish Venereological Conference, Warsaw, 1971, p. 159
20 refs

110 patients known to be hypersensitive to penicillin and 140 controls were skin-tested with crystalline penicillin (100 units) and penicilloylpolylysine (PPL). The former gave positive or weak positive results in 43.6 per cent. of the penicillin-sensitive subjects, the latter was positive in 72.5 per cent. of this group. The corresponding figures

in the control group were 12.2 and 10.0 per cent. PPL is thus more specific and more sensitive than crystalline penicillin. In some of the cases indirect basophil degranulation and lymphocyte transformation was also performed but gave inferior results to skin testing with PPL.

G. W. Csonka

Routine Use of Penicillin Skin-Testing on an Inpatient Service

ADKINSON, N. F., JR., THOMPSON, W. L., MADDREY, W. C., and LICHTENSTEIN, L. M. (1971)
New Engl. J. Med., **285**, 22

Allergy to Cephalosporins: A Study carried out using Skin Tests, the Shelley Test, and the Test for Lymphoblastic Transformation, with Reference to Penicillin Allergy [in French]

GRILLIAT, J. P., VAUTRIN, D. A., JANOT, C., PUPIL, P., and HUMBERT, J. C. (1970)
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Incidence of Positive Immunological Reactions to Cephaloridine in Subjects Allergic to Penicillin, Studied with the Aid of the Lymphoblastic Transformation Test [in French]

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Skin Tests in Penicillin Allergy [in German]

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Public health and social aspects

Prophylactic Treatment of Venereal Diseases [in Polish]

TOWPIK, J., STAPINSKI, A., and SZREDER, I. Symposium of the 9th Polish Venereological Conference, Warsaw, 1971, p. 141 6 refs

The authors analysed 573 contacts of gonorrhoea or syphilis who had received prophylactic treatment in Warsaw since 1960. 362 were contacts of syphilis and received either benzathine penicillin (1.2 m.u. every 5th day for four doses) or 600,000

units procaine penicillin daily for 10 days; a few were given other antibiotics. Full follow-up was carried out and no clinical syphilis was observed. 211 contacts of gonorrhoea received 1.2-2.4 m.u. procaine penicillin, the higher dose being given to women. The results were excellent. It is concluded that this type of prophylaxis has reduced the incidence of infection and that over the years it has become more readily used and should be still more widely given.

G. W. Csonka

Social Antivenereal Activity of the Polish Eugenic Society in Warsaw (1916-1939). A Contribution to the History of Medical Societies

ZABLOTNAIK, R. (1971)
Pol. med. J., 10, 1024

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Venereal Disease Rampant**
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J. Amer. med. Ass., 218, 731

Attitudes to Venereal Disease in a Permissive Society

WIGFIELD, A. S. (1971)
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Sequelae of Sexual Freedom: The Sexually Transmitted Diseases

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Miscellaneous

Differentiation between Type 1 and Type 2 Strains of Herpes Simplex Virus by an Indirect Immunofluorescent Technique

GEDER, L., and SKINNER, G. R. B. (1971) *J. gen. Virol.*, 12, 179
1 fig., 13 refs

A simple and rapid immunofluorescent method for typing strains of herpes simplex virus is described from the Virology Department of Birmingham Medical School.

The cytoplasmic membranes of cells infected with herpes simplex virus develop altered antigen specificities. Strain-specific differences in

these surface antigens have been reported; these may be identified by an immunofluorescent technique using appropriately absorbed antisera.

Antisera were prepared in rabbits against Type 1 and Type 2 strains of herpes simplex virus. The antisera were absorbed with BHK cells, then one aliquot of each was absorbed with cells infected with Type 1 virus and another with Type 2 infected cells. Coverslip cultures of BHK cells were made and incubated for 12 hrs. They were inoculated with herpes virus preparations, which were allowed to absorb for 1 hr, after which the cells were washed with phosphate-buffered saline. The infected cells were incubated in growth medium for 5½ hrs at 37°C. Tests for cell membrane fluorescence were made on unfixed preparations of the infected cells. Washed coverslip preparations were treated with one drop of anti-herpes serum and incubated at 37°C. for 30 min. The cells were again washed and one drop of anti-rabbit gamma-globulin conjugate was applied for the same time. A similar technique was used for the detection of intracellular antigens, except that the cells were fixed in acetone before applying anti-herpes serum. The antibody titre of the antisera against the herpes-infected cells was determined.

The results showed that anti-herpes antisera absorbed with cells infected with heterotypic virus strains reacted type-specifically with the antigens on the surface of cells infected with herpes virus for 5½ hrs. Less satisfactory discrimination resulted when intracellular antigens were demonstrated in fixed preparations, possibly because some common antigens are not represented at the surface. The results suggested that cell-membrane immunofluorescence with absorbed sera would be a reliable means of type differentiation. This was verified in a series of tests with eight freshly-isolated virus strains. The strains were typed by kinetic neutralization tests with standard antisera; the result in every case was clear-cut and showed complete agreement between the two methods. The indirect cell membrane immunofluorescent test has the advantage of simplicity and rapidity over other

methods of typing. All the strains could be typed without finding any intermediate types.

G. Scrimgeour

Plasmocytosis Mucosae, an Oft-mistaken New Syndrome

(Plasmocytosis mucosae—ein oft verkanntes neues Krankheitsbild)
LUDERS, G. (1972) *Munch. med. Wschr.*, 2, 8 7 figs, 12 refs

Plasma cell balanitis is characterized by a reddish-brown glistening flat lesion involving the glans penis and often showing 'kissing' lesions in the sulcus coronae. It has lately been shown that the lesion may also occur in the mucous membranes of the mouth and conjunctiva. The condition is benign and differs histologically from the erythroplasia of Queyrat. The infiltration consists mainly of plasma cells; these show marked pleomorphism and a great amount of haemosiderin which accounts for the reddish-brown colour. Recent immunohistological studies have shown the absence of an immune reactive vasculitis. It is believed that these plasmocytic hyperplastic lesions are due to one or several external local stimuli.

G. W. Csonka

Venereal Disease in Women. I, II NICOL, C. S. (1971)

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Syphilis and Neanderthal Man

WRIGHT, A. J. M. (1971)
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Differentiation of Herpes Simplex Virus Type 1 and 2 by Temperature Markers

RATCLIFFE, H. (1971)
J. gen. Virol., **13**, 181 1 fig., 10 refs

Difference in the Properties of Thymidine Kinase produced in Cells infected with Type 1 and Type 2 Herpes Virus

THOULESS, M. E., and SKINNER, G. R. B. (1971) *J. gen. Virol.*, **12**, 195 5 refs

Epithelial Lining of Female Trigone and Urethra

PACKHAM, D. A. (1971)
Brit. J. Urol., **43**, 201 7 figs, 14 refs

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SZOLNOKI, F., TOTH, B., SIMON, J., and PALOS, M. D. (1972)
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Behçet's Syndrome

(Syndrome de Behçet)

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Balanitis Xerotica Obliterans and Urinary Obstruction

BAINBRIDGE, D. R., WHITAKER, R. H., and SHEPHEARD, B. G. F. (1971)
Brit. J. Urol., **43**, 487